Please enter the following amendments:

<u>In the Claims:</u>

1.   (Currently Amended) A method, comprising:

   providing a semiconductor substrate <u>comprising a periphery region and a nanocluster region</u>;

   forming a sacrificial layer overlying a first portion of the semiconductor substrate <u>in the periphery region</u>;

   forming an oxide layer overlying a second portion of the semiconductor substrate;

   forming a plurality of nanoclusters overlying the sacrificial layer <u>in the periphery region</u> and <u>overlying</u> the ~~oxide layer~~ <u>semiconductor substrate in the nanocluster region</u>;

   removing at least the plurality of nanoclusters overlying the sacrificial layer <u>in the periphery region</u>; and

   removing the sacrificial layer.

Claim 2 (Canceled)

3.   (Currently Amended) The method of claim ~~2~~ <u>1</u>, wherein removing the ~~at least a portion of the~~ plurality of nanoclusters comprises removing the at least a portion of the plurality of nanoclusters which overlies the sacrificial layer in the periphery region.

4.   (Currently Amended) The method of claim ~~2~~ <u>1</u>, further comprising forming a nanocluster device in the nanocluster region and forming a non-nanocluster device in the periphery region.

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5. (Original) The method of claim 1, wherein the sacrificial layer has a thickness of at least 10 nanometers.

6. (Original) The method of claim 1, wherein the sacrificial layer comprises at least one of a nitride or an oxide.

7. (Original) The method of claim 1, wherein the sacrificial layer comprises an oxide which etches faster than a thermal oxide.

8. (Original) The method of claim 1, wherein a material of the sacrificial layer is selected such that the plurality of nanoclusters are selectively removable with respect to the sacrificial layer.

9. (Currently Amended) ~~The method of claim 1~~ A method, comprising:

    providing a semiconductor substrate;

    forming a sacrificial layer overlying a first portion of the semiconductor substrate, ~~wherein forming the sacrificial layer comprises~~ by depositing at least one of a nitride-containing layer over the semiconductor substrate, an oxide-containing layer over the semiconductor substrate, or a polysilicon-containing layer over the semiconductor substrate;

    forming an oxide layer overlying a second portion of the semiconductor substrate;

    forming a plurality of nanoclusters overlying the sacrificial layer and the oxide layer;

removing at least the plurality of nanoclusters overlying the sacrificial layer; and

removing the sacrificial layer.

10. (Original) The method of claim 1, wherein the sacrificial layer comprises at least one of a pad oxide or a pad nitride.

11. (Original) The method of claim 10, wherein forming the sacrificial layer comprises:

forming at least one of a pad oxide layer or a pad nitride layer over the semiconductor substrate; and

forming isolation regions in the semiconductor substrate using the at least one of the pad oxide layer or the pad nitride layer.

12. (Original) The method of claim 1, further comprising:

performing a clean after removing the at least a portion of the plurality of nanoclusters and prior to removing the sacrificial layer.

13. (Original) The method of claim 12 further comprising:

implementing the clean with a composition that has a basic pH to overcome electrostatic attraction of the plurality of nanoclusters to the sacrificial layer and to the semiconductor substrate.

14. (Original) The method of claim 12 further comprising:

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implementing the clean with a mechanical action to remove the
plurality of nanoclusters from the sacrificial layer and from
the semiconductor substrate.

15. (Original) A method, comprising:

providing a semiconductor substrate having a periphery region and a
nanocluster region;

depositing a first sacrificial layer over the semiconductor substrate in
the periphery region and in the nanocluster region;

removing a portion of the first sacrificial layer in the nanocluster
region;

forming an insulating layer over the semiconductor substrate in the
nanocluster region;

forming a plurality of nanoclusters over the semiconductor substrate,
wherein the plurality of nanoclusters is formed over a remaining
portion of the first sacrificial layer in the periphery region and over
the insulating layer in the nanocluster region;

forming a patterned masking layer over the plurality of nanoclusters in
the nanocluster region; and

removing the plurality of nanoclusters which overlie the first sacrificial
layer in the periphery region and the remaining portion of the first
sacrificial layer.

16. (Original) The method of claim 15, further comprising forming a second
sacrificial layer over the semiconductor substrate, wherein depositing the
first sacrificial layer comprises depositing the first sacrificial layer over
the second sacrificial layer.

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17. (Original) The method of claim 16, wherein the first sacrificial layer comprises at least one of a nitride or an oxide, and wherein the second sacrificial layer comprises an oxide.

18. (Original) The method of claim 15, wherein removing the plurality of nanoclusters which overlie the first sacrificial layer in the periphery region and the remaining portion of the first sacrificial layer comprises:

> performing a clean after removing the plurality of nanoclusters which overlie the first sacrificial layer in the periphery region and prior to removing the remaining portion of the first sacrificial layer.

19. (Original) The method of claim 15, further comprising forming a nanocluster device in the nanocluster region using at least a portion of the plurality of nanoclusters over the insulating layer in the nanocluster region and forming a non-nanocluster device in the periphery region.

20. (Original) A method, comprising:

> providing a semiconductor substrate having a periphery region and a nanocluster region;
>
> forming a first pad layer over the semiconductor substrate in the periphery region and in the nanocluster region;
>
> forming isolation regions in the semiconductor substrate using the first pad layer, wherein the isolation regions extend through the first pad layer into the semiconductor substrate;
>
> removing a portion of the first pad layer in the nanocluster region;

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forming an insulating layer over the semiconductor substrate in the nanocluster region;

forming a plurality of nanoclusters over the semiconductor substrate, wherein the plurality of nanoclusters is formed over a remaining portion of the first pad layer in the periphery region and over the insulating layer in the nanocluster region;

forming a patterned masking layer over the plurality of nanoclusters in the nanocluster region; and

removing the plurality of nanoclusters which overlie the first pad layer in the periphery region and the remaining portion of the first pad layer.

21. (Original) The method of claim 20, further comprising forming a second pad layer over the semiconductor substrate in the periphery region and in the nanocluster region, wherein the first pad layer is formed over the second pad layer, and wherein forming isolation regions comprises:

forming isolation regions in the semiconductor substrate using the first and second pad layers, wherein the isolation regions extend through the first and second pad layers into the semiconductor substrate.

22. (Original) The method of claim 20, further comprising:

removing a portion of the second pad layer in the nanocluster region prior to forming the insulating layer, and

removing a remaining portion of the second pad layer in the periphery region after removing the plurality of nanoclusters.

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23. (Original) The method of claim 20, wherein the first pad layer comprises a nitride and the second pad layer comprises an oxide.

24. (Original) The method of claim 20, further comprising forming a second pad layer over the first pad layer in the periphery region and in the nanocluster region, wherein forming isolation regions comprises:
   forming isolation regions in the semiconductor substrate using the first pad layer and the second pad layer, wherein the isolation regions extend through the first pad layer and the second pad layer into the semiconductor substrate.

25. (Original) The method of claim 24, further comprising:
   removing the second pad layer in the periphery region and in the nanocluster region prior to removing the portion of the first pad layer in the nanocluster region.

26. (Original) The method of claim 24, wherein the first pad layer comprises an oxide and the second pad layer comprises a nitride.

27. (Original) The method of claim 20, wherein the first pad layer comprises at least one of an oxide or a nitride.

28. (Original) The method of claim 20, wherein removing the plurality of nanoclusters which overlie the first pad layer in the periphery region and the remaining portion of the first pad layer comprises:

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performing a clean after removing the plurality of nanoclusters which
overlie the first pad layer in the periphery region and prior to
removing the remaining portion of the first pad layer.

29. (Original) The method of claim 20, further comprising forming a
nanocluster device in the nanocluster region using at least a portion of the
plurality of nanoclusters over the insulating layer in the nanocluster
region and forming a non-nanocluster device in the periphery region.